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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,665	11/21/2005	Pratibhash Chattopadhyay	FER-14858.001.001	6541
7609 7590 03/05/2007 RANKIN, HILL, PORTER & CLARK, LLP 925 EUCLID AVENUE, SUITE 700 CLEVELAND, OH 44115-1405			EXAMINER KENNEDY, SHARON E	
			ART UNIT	PAPER NUMBER
			1615	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/05/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,665	<b>Applicant(s)</b> CHATTOPADHYAY ET AL.	
	<b>Examiner</b> Sharon E. Kennedy	<b>Art Unit</b> 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments have been fully considered and are persuasive. The rejection of claims 1-20 as being anticipated by Manning '559 has been withdrawn.

A new art rejection follows. This rejection is being made non-final so that applicant may adequately respond to this new rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sievers et al., US 6,095,134. Sievers discloses the process claimed. See especially the Abstract and column 4, lines 17-33. The substance is dissolved in a solvent, contacted with a super critical fluid to form an emulsion, and sprayed to produce the particulates.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manning '559 with reference to Chattopadhyay, US 6,998,051, in view of Sievers et al., US 6,095,134.

Applicant argues that Manning differs in that the amphiphilic material and the organic solvent form a single liquid phase, which is not an emulsion. The examiner agrees with this interpretation, however, applicant's emulsion is formed when the solution and the supercritical fluid or compressed gas come together. Applicant's initial step is the same as Manning, there is a solute dissolved in one or more solvents.

Applicant further states that Manning cannot show an emulsion during the precipitation phase (contact with the antisolvent) because the antisolvent fluid and the organic solvent are at least "partly miscible." Applicant thus concludes that in view they are at least partly miscible, there can be no emulsion because there is no phase boundary. However, the substances are only **partly** miscible, accordingly, they form an emulsion. Support for this position is evidenced by the patent to Chattopadhyay et al., US 6,998,051, which is cited herein only for its technical description for partially miscible solvents forming an emulsion. As stated in the Abstract, "[t]he solute to be precipitated is dissolved in the solvent to form a solution, and the solution is dispersed in an immiscible or partially miscible liquid to form an emulsion. The particles are produced via the extraction of the solvent from the emulsion using the supercritical fluid. The process can produce an aqueous suspension of particles that are substantially insoluble

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in water, and the solvents used in the process to form the emulsion initially can be recovered and recycled.”

However, applicant accurately points out that Manning FIG. 13 shows a process which differs from applicant's claimed subject matter. With reference to FIG. 13, supercritical gas from antisolvent tank 122 is fed into the antisolvent chamber 124. After the antisolvent chamber is pressurized, nitrogen is used to force the solution through orifice 142 to spray solution 136 into the antisolvent chamber 124. Thereafter, solid particles precipitate and are allowed to settle and are thereafter removed with filter 144.

However, Manning also states that the contacting of the liquid feed solution and the antisolvent fluid may be accomplished using any suitable contact technique. The most common of these techniques is the of spray nozzle technique as exemplified by the secondary reference to Sievers, which is less complicated and expensive. Accordingly, it would be obvious to one of ordinary skill in the art to use the common method of spray technique as taught Sievers in the Manning production to reduce the production costs of the Manning particles.

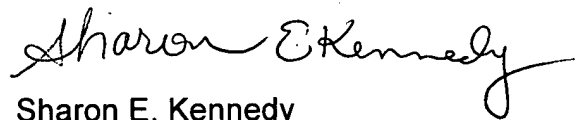
#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Kennedy whose telephone number is 571/272-4948. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on 571/272-8373.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sharon E. Kennedy  
Primary Examiner  
Art Unit 1615